

## 7.0 Cumulative Impacts

This chapter considers the potential cumulative impacts of the US 53 project combined with other past, present, and reasonably foreseeable future actions.

### 7.1 Methodology

Minnesota Rules, part 4410.2300, item H requires that regulatory governmental units include a discussion of cumulative impacts in an Environmental Impact Statement (EIS). Cumulative impacts are also defined by the federal Council on Environmental Quality (CEQ) as “impacts on the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions” (40 CFR 158.7).

Cumulative impacts are not necessarily causally linked to the proposed US 53 alternatives. Rather, they are the total effect of all known actions (past, present, and future) in the vicinity of the proposed project with impacts on the same types of resources. The purpose of cumulative impacts analysis is to look for impacts that may be individually minimal but which could accumulate and become significant and adverse when combined with the effects of other actions.

The cumulative impacts analysis is limited to resources, ecosystems, and human communities affected by the US 53 project alternatives (i.e., recreational lands and trails, economics, community connections, utilities, water supply/groundwater, wetlands, surface water quality/storm water, noise, vegetation, and hazardous materials). The study area varies by resource category but generally includes areas around each of the proposed alternative alignments under consideration, including the No Build Alternative. The time frames considered, in general, include past actions that have affected resources to be assessed and assessment of foreseeable future impacts approximately one to 30 years forward in time (depending on the resource), which is considered a reasonable planning timeframe.

To determine cumulative impacts to these resources and areas, information was gathered relating to current and foreseeable future projects in the study area. This information was collected by reviewing available plans and permits, including contacting the cities, county, and landowners in the study area. The projects considered in the cumulative impacts assessment are described in the next section.

### 7.2 Scope of Analysis

#### 7.2.1 Past Actions

Iron ore mining has been and remains a dominant activity within the study area and has had a substantial effect on area social, economic, and environmental resources. Mining in the Rouchleau Pit, on the east side of Virginia, stopped in late the 1980s. Since that time, water in the pit has risen and now stabilized, and most of the land area disturbed by past mining activity has revegetated. The Auburn Pit area south of Virginia is still active and is known as the UTAC mine.

Land uses adjacent to the project corridors and outside the mined areas are generally residential/rural residential with business development along US 53 that has been gradually expanding, primarily within the Quad Cities. Significant development projects in the nearby area have included the new P&H MinePro Services facility just west of US 53 and south of US 169 in Virginia (completed in 2012), and the addition of a new clinic to the Essentia Health-Virginia (former Virginia Regional Medical Center) in 2005, located on 9th Street North in Virginia.

There have been no major roadway changes in the study area vicinity in the past several years. Minor projects in the immediate area include bridge deck resurfacing on MN 37 over US 53 in Eveleth,

improvements to Alaska Avenue in Gilbert, and a number of reclaim and overlay projects completed by St. Louis County in the project area in 2012, 2013, and 2014, including a segment of Co. 7 between Co. 101 and US 169, segments of Cedar Island Drive, Ely Lake Drive, and Sparta Road near Ely Lake southeast of Eveleth, Jones Street through Eveleth (Routes 146 and 147), and segments of Routes 776 and 329 east of Iron Junction.

## 7.2.2 Future Anticipated Actions

In addition to the proposed US 53 project, the following additional future projects were identified through coordination with jurisdictions and landowners in the study area.

**Table 7.2-1 Additional Future Projects**

Project Description	Proposer	Timeframe	Potential Environmental Impacts of Action
General development planned for parcels on north side of MN 135, west of MN 37 in Gilbert area	City of Gilbert	Over next 20 years	economics, utilities, wetlands, surface water quality
Existing and potential future mining and mining-related activities within the permit to mine and environmental setting boundaries	UTAC/RGGS	Current permit through 2040, with ability to extend or modify	water supply, trails, wetlands, surface water quality, economics, noise, utilities
Continue mining and mining-related activities within the permit to mine area and environmental setting boundary to the southwest, includes closing Co. 101 west of Eveleth for mine crossing	UTAC	2024	Community connection, traffic
Expansion of mine in Mountain Iron	Minntac	Project will extend mine life and taconite production to 2031	water supply, trails, wetlands, surface water quality, economics, noise, utilities
Reconfiguration of water supply systems	City of Virginia	Undetermined; study underway	utilities, water supply
Expansion of Iron Range Off-Highway Vehicle Recreation Area (OHVRA) east of Virginia	Minnesota Department of Natural Resources (DNR)	2013-2015	vegetation, noise, wetlands, surface water quality

## 7.2.3 Impacts and Mitigation

This section addresses the resource areas for which the proposed project will cause direct or indirect impacts and for which past and other anticipated future actions would also be expected to cause impacts. Only those issue areas which are directly or indirectly impacted by both the US 53 project and past and/or other anticipated future projects are discussed below.

### 7.2.3.1 Recreational Lands and Trails

#### Impacts of US 53 Alternatives

Impacts to the Mesabi Trail and a portion of the Trail Hawks Snowmobile Club Spur trail as a result of the US 53 project (new crossings of trail by US 53), specifically Alternatives E-1A and E-2, could be mitigated to maintain trail access at crossing locations (signal, bridge, or tunnel).

Impacts to the OHVRA by Alternatives E-1A and E-2 are expected to be negligible (acquisition of property that has no impact on recreational use, features, or attributes).

#### Impacts of Past/Future Projects

Permitted mining activity would directly affect/eliminate portions of the Mesabi Trail and local snowmobile trails under all alternatives, at the time when RGGS terminates license agreements for trail use. No mitigation is stipulated in the current agreement with these users.

There are no known impacts planned to the OHVRA by other projects.

#### Cumulative Impacts/Mitigation

The mining trail impacts would eliminate the trail section across the mine, rendering the Minnesota Department of Transportation's (MnDOT) trail mitigation ineffective. MnDOT will work with UTAC/RGGS and local trail authorities to create a corridor via permit for trail use along the east side of Alternatives E-1A and E-2, with trail construction to be completed by others. The trail options for Alternative M-1 are expected to follow the No Build reroute alignment. It is the desire of UTAC/RGGS and the St. Louis and Lake Counties Regional Railroad Authority (SLLCRRRA) to reconstruct the trail concurrent with US 53 road construction. SLLCRRRA has received state bond funds for the trail relocation. No further mitigation can be defined at this time.

### 7.2.3.2 Economics

#### Impacts of US 53 Alternatives

The US 53 project is anticipated to have no economic impacts to the local economy, unless the No Build Alternative is selected. The No Build Alternative would increase travel times for destinations across the Biwabik Iron Formation, increase traffic volumes on the reroute of US 53, decrease traffic volumes along the US 53 business strip between 12th and 2nd Avenues and Midway, and result in substantial sales and job losses in the area. These changes would result in reduced business along the US 53 corridor nearest the existing easement agreement area segment due to traffic pattern changes. However, it may temporarily result in some new development along the new reroute corridors until Co. 101 is closed to through traffic (estimated in 2024).

From a mine operations perspective, the Existing US 53, M-1, and E-2 Alternatives could restrict access to substantial quantities of ferrous resources, which could affect the long-term viability of the mining company and local economy. Alternative E-1A may also limit access to some ferrous resources but to a much lesser extent than the other alternatives. Alternative M-1 and the Alternative E-1A Bridge Option, by going through the permit to mine area, create potential business operation risks due to the effect on the mine's ability to comply with its air quality permit. MnDOT has identified mitigation measures for its contribution to this potential impact (see Section 4.2 regarding mitigation).

#### Impacts of Past/Future Projects

Past mining activity in the area has certainly affected the local economy through employment, induced development, and retail and property expenditures. Permits exist or are planned for continued mining in the area in the future (20 to 30 years). This will continue to stimulate the local economy by providing employment opportunities and drawing more workers to the area, who will in turn spend more money in the area. The Taconite Production Tax also provides a significant contribution to the local economy.

#### Cumulative Impacts/Mitigation

If the mine cannot meet ambient air quality standards, this could limit mining operations, thereby limiting economic potential of the mine and in turn the amount of Taconite Production Tax generated. MnDOT and UTAC worked on measures to mitigate potential air quality compliance impacts on UTAC's operations through roadway design, minimizing mine dust generation, and development of a plan to minimize potential exposure of highway users to mine air emissions through incorporation of highway design measures (see Section 4.2.4 regarding mitigation).

Potential (see Chapter 6: Indirect/Secondary Impacts) and other future anticipated actions increase access to businesses in the area and expand the base of potential local consumers. These developments

would be reviewed by appropriate City staff, and mitigation for impacts to wetlands, surface waters, and other regulated resources would be provided. No further mitigation is required.

### 7.2.3.3 Community Connections

#### Impacts of US 53 Alternatives

The No Build Alternative would remove direct connections between some cities in the area, thereby causing school bus rerouting and lengthened emergency response and travel times between those cities. Impacts to connectivity and travel times would not be noticeable for the Existing US 53, M-1, E-1A, or E-2 Alternatives.

#### Impacts of Past/Future Projects

In general, past and future planned projects have not and are not anticipated to create substantial reroutes or lengthen travel or emergency response times, except for the expected closure of Co. 101 to through traffic, just west of Eveleth, by 2024. UTAC has indicated that mining in this area will require a portion of Co. 101 to close and has not indicated whether the road alignment will be replaced. Connectivity between cities in the area is not anticipated to be affected by any of the other future projects.

#### Cumulative Impacts/Mitigation

Community connections would only be affected by the proposed No Build Alternative and the future closure of Co. 101. The traffic and economic sections of this Draft EIS address the potential cumulative impacts to these resources. No potential mitigation other than project mitigation described in Section 4.7.4 has been identified.

### 7.2.3.4 Utilities

#### Impacts of US 53 Alternatives

Utility relocation would be required for all of the alternatives except the Existing US 53 Alternative, with the greatest potential impact from the No Build and M-1 Alternatives. However, given the advanced time for planning and reconstruction of utilities, this is not anticipated to cause major interruptions in service.

#### Impacts of Past/Future Projects

Continued development projects in the study area over time will put an increased demand on utility systems.

#### Cumulative Impacts/Mitigation

Effects of future projects, combined with natural population growth and the direct effects of the US 53 project, may cumulatively add to the demands on the customer base of utilities in the study area.

To meet any increased demand of utilities from anticipated future development and the other anticipated future projects, providers would plan appropriately through their regular planning processes. No further mitigation is required.

### 7.2.3.5 Water Supply/Groundwater

#### Impacts of US 53 Alternatives

Alternatives E-1A and E-2 would be within Virginia's Inner Emergency Response Area, which is an area more susceptible to drinking water contamination due to contaminant releases or other threats. Best management practices (BMPs) implemented by MnDOT would minimize potential water quality impacts. The Rouchleau Pit water would continue to be monitored by the City for turbidity and other contaminants.

#### Impacts of Past/Future Projects

Past mining activity in the area has required extensive dewatering and changes to area water levels. Expansion of the UTAC mine or potential southwest expansion of the ArcelorMittal/Minorca mine into the Rouchleau Pit has been identified by the City and the mine operator(s) as a potential future impact to the existing water supply. As mining activity approaches the Rouchleau Pit, at some point dewatering would

be necessary to allow for mine operations, resulting in a drop in the water level of the Rouchleau Pit. The city of Virginia relies on the pit for drinking water, so the water supply would need to be assessed as part of mining activities that could affect that pit.

#### Cumulative Impacts/Mitigation

Alternatives E-1A and E-2 would implement mitigation measures to minimize and avoid potential impacts to Rouchleau Pit water quality. The Alternative E-1A RSS Option may temporarily (18 months) drawdown the water level in the Rouchleau Pit; whereas the mining impacts on water supply would be long-term (dozens of years) on water levels. Additionally, the mining impact to the water supply would not occur within the same timeframe as the roadway relocation project, and the mining activity in the Rouchleau Pit area will occur regardless of which road alignment is selected. Mitigation for potential water quality impacts for the US 53 project and for future mining activity would be provided, as required by NPDES and other permit requirements. Impacts related to road and mine activities on water levels would be addressed through respective DNR water appropriation permits. No further mitigation is required.

### 7.2.3.6 Water Body Modifications and Wetlands

#### Impacts of US 53 Alternatives

Alternatives M-1, E-1A, and E-2 would have an impact on adjacent wetlands, affecting up to 9, 11, and 9 acres, respectively. The No Build and Existing US 53 Alternatives would not impact wetlands. Only Alternatives E-1A and E-2 have the potential to affect the body of water in the Rouchleau Pit. The Alternative E-1A RSS Option may require substantial dewatering that could affect water levels temporarily in other downstream (discharge) waters.

#### Impacts of Past/Future Projects

Past and current mining activity in the area has required extensive dewatering and has changed water levels in surrounding surface waters, including wetlands. Future mining in the study area may include dewatering of the Rouchleau Pit and expansion of mining between the Auburn and Rouchleau Pits. This may have the potential to impact adjacent wetlands and waterbodies; however, without a specific mining plan these impacts cannot be certain. Past mine dewatering may have also affected water quality in downstream waters (i.e., Manganika Lake is high in methyl mercury).

#### Cumulative Impacts/Mitigation

Past mining and filling of the Rouchleau Pit and future mining and dewatering of the Rouchleau Pit could result in a lower water elevation in the pit. Alternative E-1A would cross the pit along an existing submerged haul road embankment (RSS Option or Bridge Option), and Alternative E-2 would cross the pit with a bridge, avoiding most impacts to the pit. US 53 wetland impacts would be mitigated consistent with obtained wetland, NPDES, and appropriation permits/approvals.

Under current state and federal laws, the mine operator/owner would be required to determine if the affected wetland areas are jurisdictional or regulated and obtain the appropriate approvals and replacement required, similar to the US 53 project. The extent of potential impacts to wetlands by mining activities cannot be estimated without a mining plan (which provides information such as depth and amount of dewatering), and such a plan does not currently exist. However, the impacts would be mitigated so there would be no cumulative impact on wetlands. Dewatering impacts from the US 53 project would be temporary if they occur and primarily result from the volume of water transferred in a short period of time (during construction) versus mining dewatering which would drop water levels over a much longer time period (decades). Both actions would require obtaining necessary permits from the DNR and Minnesota Pollution Control Agency (MPCA) and mitigate impacts to discharge/receiving waters.

### 7.2.3.7 Surface Water Quality/Stormwater

#### Impacts of US 53 Alternatives

Each of the alternatives, except the Existing US 53 Alternative, would result in a net decrease in impervious surface area, and treatment of stormwater would not be required. However, for Alternatives M-1, E-1A, and E-2, water quality treatment of the runoff from the pit crossing areas would be necessary

to maintain the existing level of water quality treatment in the study area. Stormwater ponding would be designed to meet the requirements of the NPDES permit for water quality treatment for the assumed areas with constrained cross section.

#### Impacts of Past/Future Projects

It would be expected that future mining expansion and highway and development projects could increase impervious area and/or increase stormwater runoff. Under the Existing US 53, M-1, E-1A, or E-2 Alternatives, mining by UTAC of the pit crossing areas would cut off the stormwater east of the Rouchleau Pit that currently crosses along the north side of US 53, requiring rerouting of this flow to another receiving water. These projects would be subject to state and federal requirements.

#### Cumulative Impacts/Mitigation

The identified past, present, and future projects may incur some level of stormwater runoff which may affect nearby surface waters. Stormwater would be regulated, and mitigation would be completed on a project-by-project basis, as required by state and federal regulations. Therefore, there would be no cumulative impact on surface water quality and stormwater given that the impacts would be mitigated.

### 7.2.3.8 Noise

#### Impacts of US 53 Alternatives

The No Build, M-1, E-1A, and E-2 Alternatives would move the traffic noise source from the existing US 53 corridor to a new corridor, therefore affecting different receptors. Noise walls would be implemented in areas where noise regulatory thresholds are exceeded, consistent with MnDOT's noise policy (i.e., where determined feasible and cost effective).

#### Impacts of Past/Future Projects

Traffic from anticipated future development projects would contribute to future traffic noise generation; however, those potential impacts have already been accounted for in the future traffic forecasts used for the US 53 traffic noise analysis.

Implementation of future mine expansion projects and/or the OHVRA facility may also increase or change the location of noise generation from activities at those facilities. If noise generation exceeds regulatory thresholds, special permit conditions or implementation of mitigation may be required. For example, the DNR has source standards for off-road vehicles, and the MPCA regulates noise as per the requirements of Minnesota Rules, part 7030.

#### Cumulative Impacts/Mitigation

Each separate project would be responsible for mitigating its own noise impacts based on regulatory requirements. Also, identified future projects are far enough apart geographically that any increase in noise is not likely to affect the same populations, and, therefore, cumulative effects would be minimal.

### 7.2.3.9 Vegetation/Cover Types

#### Impacts of US 53 Alternatives

Alternatives M-1, E-1A, and E-2 would result in localized loss of vegetation in some areas. No mitigation is required for these impacts other than revegetation and stabilization of disturbed areas.

#### Impacts of Past/Future Projects

Permits exist for continued mining in the area in the future. Mining activity will likely remove existing vegetation. When mining areas are abandoned, it is likely that these areas would be revegetated to the extent feasible, as was done when mining in the Rouchleau Pit was completed.

#### Cumulative Impacts/Mitigation

The implementation of the US 53 project, combined with other past/future actions, could result in a cumulative reduction in vegetative cover in the project area over time.

The planned projects would be expected to adhere to erosion control and vegetation management BMPs during construction in order to limit indirect impacts to vegetative cover and habitats, and with this mitigation, minor adverse cumulative impacts are anticipated.

#### 7.2.3.10 Hazardous Materials

##### Impacts of US 53 Alternatives

Hazardous materials sites within 500 feet of any project alignment have been identified. Since no right-of-way acquisition is proposed for the No Build or Existing US 53 Alternatives, no hazardous materials impacts are anticipated. Right-of-way would be acquired for Alternatives M-1, E-1A, and E-2. A Phase II Environmental Site Assessment was completed for six sites; two, six, and four sites are within the estimated limits of construction for Alternatives M-1, E-1A, and E-2, respectively.

##### Impacts of Past/Future Projects

An assessment of hazardous materials would occur for land acquisition or disturbance as necessary for future projects. It is possible that hazardous materials may be encountered or that future projects would become generators of hazardous waste during construction or operation.

##### Cumulative Impacts/Mitigation

No cumulative impacts to hazardous waste sites are anticipated as a result of past, present, and future projects. For any project, proper agency coordination would take place to identify the appropriate plans and provisions necessary to handle known or unknown hazardous materials. A management plan would be developed for properly handling, treating, storing, and disposing of solid wastes, hazardous materials, petroleum products, and other regulated materials/wastes that are used or generated during construction. Any specific mitigation would be handled on a project-by-project basis.